

**DEARBORN DISCOVERY CORE 24****WRITTEN AND ORAL COMM.**

(6 credits)

*Composition Placement Exam required*

COMP 105 (3) and

COMP 270 (3)

*Both required if not taken to fulfill DDC Written and Oral Communication***HUMANITIES AND THE ARTS**

(6 credits)

See DDC approved list in Degree Works or

[HTTPS://APP.SMARTSHEET.COM/B/PUBLISH?EQBCT=D  
AFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBCT=D AFF687F800B4FE89910A9CEA66B1627)**SOCIAL AND BEH. ANALYSIS** (9 credits)

ECON 201 (3 cr)

*Required if not taken in fulfillment of DDC Soc. and Beh. Analysis*

Additional (6 credits) must be chosen from DDC approved list in Degree Works or

[HTTPS://APP.SMARTSHEET.COM/B/PUBLISH?EQBCT=D  
AFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBCT=D AFF687F800B4FE89910A9CEA66B1627)**INTERSECTIONS** (3 credits)

Choose one course from DDC approved list in Degree Works or

[HTTPS://APP.SMARTSHEET.COM/B/PUBLISH?EQBCT=D  
AFF687F800B4FE89910A9CEA66B1627](https://app.smartsheet.com/b/publish?EQBCT=D AFF687F800B4FE89910A9CEA66B1627)

Suggested intersections courses included CIS 479 (3), ENGR 400 (3), ENT 400 (3).

**Important DDC Notes:**

DDC requirements apply to Freshmen admitted fall 2015 and later, and to Transfers admitted fall 2017 and later.

Many DDC courses fulfill multiple categories. However, a single DDC course may be used for a **maximum of three DDC categories****\*\*Beware NO-CREDIT courses\*\***

NO-CREDIT listed at end of CECS Handbook:

<https://umich.app.box.com/s/6a5c4j9hwlcnpzy7o2xjmvIrtumvoj>**MATHEMATICS, Sciences, Mgmt 37****MATHEMATICS & STATISTICS (22)**MATH 115 (4) *Calculus I**(Fulfills DDC Quant. Thinking)*MATH 116 (4) *Calculus II*CIS 275 (4) *Discrete Structures I*CIS 306 (4) *Discrete Structures II*IMSE 317 (3) *Probability/Statistics*MATH 227 (3) *Linear Algebra***LABORATORY SCIENCE Sequence (8)***(Fulfills DDC Natural Sciences)*

Two courses, 8 credits, in a sequence from:

BIOL 130 (4) and BIOL 140 (4)

*or* CHEM 134 or 144 (4) & CHEM 136 (4)*or* GEOL 118 (4) and GEOL 218 (4)*or* PHYS 125 (4) and PHYS 126 (4)*or* PHYS 150 (4) and PHYS 151 (4)**ADDITIONAL SCIENCE Course (4)**

Four additional science credits from:

ASTR 130/131 [= old PHYS 130/131]

BIOL 130 BIOL 140

CHEM 134 or CHEM 144

CHEM 136 or CHEM 146

CHEM 225 CHEM 226 CHEM 227

GEOL 118 GEOL 218

PHYS 125 or PHYS 150

PHYS 126 or PHYS 151

[Credit for only one of following two courses:

CHEM 144 and CHEM 134,

CHEM 146 and CHEM 136,

PHYS 125 and PHYS 150, and

PHYS 126 and PHYS 151] \*\*

**BUSINESS COURSES** (3 credits)OB 354 (3) *Organizational Behavior**(Fulfills 3 cr. of DDC Soc. and Beh. Analysis)***\*\* Only 1 course from CIS 296 or CIS 297 or CIS 298 may be used towards the 120 credits of the degree****CIS COURSES and ELECTIVES 59****CIS CORE** – 7 courses (28 credits)CIS 150 (4) *Computer Science I*CIS 200 (4) *Computer Science II*CIS 310 (4) *Comp Org & Assembly Lang*CIS 3501 (4) *Data Struc & Alg for SE*CIS 375 (4) *Software Engineering I**(Fulfills DDC Upper-Level Writing)*CIS 427 (4) *Networks & Distrib Systems*CIS 450 (4) *Operating Systems***REQUIRED for SOFTWARE ENGR (14)**CIS 285 (3) *Software Engineering Tools*CIS 376 (4) *Software Engineering II*CIS 476 (3) *Softw Arch/Design Patterns*CIS 4961 (2) *Design Seminar for SE I*CIS 4962 (2) *Design Seminar for SE II**(Senior Design fulfills DDC Capstone and Critical / Creative Thinking)***ONE APPLICATION AREA SEQUENCE (7-9)****(Appl Area & Tech Electives must total 14)**Any courses taken in this sequence cannot be used for Technical Electives credit.

a) Information Systems Sequence (14)

CIS 425 (4) *Information Systems*CIS 447 (3) *Comput & Network Security*

Technical Electives from list below (7)

b) Computer Game Design Sequence (14)

CIS 297 (3) *Introduction to C#*[CIS 296 or CIS 298 **cannot** count as Technical Electives since CIS 297 is required]CIS 487 (3) *Computer Game Design I*CIS 488 (3) *Computer Game Design II*

Technical Electives from list below (5)

c) Web Engineering Sequence (14)

CIS 421 (4) *Database Systems*

Take one of the following two courses:

CIS 435 (3) *Web Technology*CIS 436 (3) *Mobile Appl. Des & Imp*

Technical Electives from list below (7)

**TECHNICAL ELECTIVES**

CIS 296 (3), CIS 297 (3), or CIS 298(3)

(only one of these three courses CIS 296, CIS 297, or CIS 298, can be counted toward fulfilling the 120 credit hours for the Software Engineering program)

CIS 316 (3) *Prac Aspects of Computer Sec*CIS/IMSE 381 (4) *Industrial Robotics*CIS 387 (4) *Digital Forensics I*CIS 400 (4) *Programming Languages*CIS 405 (3) *Algorithm Analysis/Design*CIS 421 (4) *Database Systems*CIS 423 (3) *Decision Sup & Expert Sys*CIS 425 (4) *Information Systems*CIS 435 (3) *Web Technology*CIS 436 (3) *Mobile App Des & Imp*CIS 437 (3) *Advanced Networking*CIS 447 (3) *Computer & Network Security*CIS 451 (3) *Computer Graphics*CIS 452 (3) *Computer Animation*CIS 467 (4) *Digital Forensics II*CIS 474 (3) *Compiler Design*CIS 479 (3) *Artificial Intelligence*CIS 487 (3) *Computer Game Design*CIS 488 (3) *Computer Game Design II*ECE 372 (4) *Microprocessors*ECE 473 (4) *Embedded System*ENGR 360 (4) *Design Innovations*

ENGR 399 (1) Prof Pract Engr & CS  
ENGR 492 (1-3) Expr Hnrs Dir Rsrch  
ENGR 493 (1-3) Expr Hnrs Dir Dsgn  
Only one of the following three courses  
ENGR 360 (4) Design Innovations  
ENGR 400 (3) Applied Bus Tech  
ENT 400 (3) Intro to Entrepreneurship

**GENERAL ELECTIVES (3)**